Claims

We claim:

1. A method for producing *Pasteuria* endospores *in vitro*, said method comprising introducing *Pasteuria* into a growth medium, growing the *Pasteuria* in said growth medium, and obtaining said endospores.

2. The method, according to claim 1, wherein said growth medium comprises a helper factor which facilitates the *in vitro* growth of said *Pasteuria*.

3. The method, according to claim 2, wherein said helper factor is a microorganism or a chemical compound produced by a microorganism.

4. The method, according to claim 3, wherein said microorganism is selected from the group consisting of *Enterobacter cloacae* and *Pantoea* spp.

5. The method, according to claim 3, wherein said microorganism has all the identifying characteristics of ATCC _____.

6. The method, according to claim 3, wherein said helper factor is a chemical compound produced by said microorganism.

7. The method, according to claim 6, wherein said chemical factor passes through a membrane having pores of about 0.5 $\mu$m.

8. The method, according to claim 7, wherein said chemical factor is HF-1.

9. The method, according to claim 1, wherein said growth medium does not comprise an antibiotic.

10. The method, according to claim 1, wherein said growing step is carried out without stirring.

11. The method according to claim 1, wherein a compound selected from the group consisting of manganese sulfate and lipids is added to induce the production of endospores.

12. A method of protecting a plant from infection by nematodes wherein said method comprises applying to the plant, or to the plant's surroundings, a helper factor which promotes the colonization or proliferation of a bacterial nematode biocontrol agent.

13. The method, according to claim 12, wherein said substance is a helper factor which promotes the growth of *Pasteuria*.

14. The method, according to claim 13, wherein said helper factor is a microorganism, or is a chemical compound produced by a microorganism.

15. The method, according to claim 14, wherein said microorganisms is a motile rod.

16. The method, according to claim 14, wherein said microorganism is selected from the group consisting of *Enterobacter cloacae* and *Pantoea* spp.

17. The method, according to claim 14, wherein said microorganism has all of the identifying characteristics of ATCC _____.

18. The method, according to claim 14, wherein said helper factor is a chemical compound produced by a microorganism.

19. The method, according to claim 18, wherein said chemical factor passes through a membrane having pores of about 0.5 $\mu$m.

20. The method, according to claim 19, wherein said chemical factor is HF-1.

21. The method, according to claim 12, wherein said helper factor is applied to the soil.

22. The method, according to claim 12, wherein said helper factor is applied as a seed coating.

23. The method, according to claim 12, wherein said plant produces said helper factor.

24. The method, according to claim 23, wherein said plant is transformed to express said helper factor.

25. The method, according to claim 24, wherein said helper factor is expressed in the roots of said plant.

26. A compound designated HF-1 which facilitates the *in vitro* growth of *Pasteuria*, which can be obtained from ATCC _____, and which is less than 50 $\mu$m in size.

27. A biologically pure culture of the isolate designated ATCC _____.

28. An endospore composition produced by the process of claim 1.

29. A method for producing bacterial endospores *in vitro* wherein said method comprises growing said bacteria in a growth medium which comprises a helper factor which promotes the growth of said bacteria wherein said helper factor is a microorganism or is a chemical compound produced by a microorganisms.

30. The method, according to claim 29, wherein said bacteria are parasites which are grown *in vitro* in the absence of living host tissue.